

REQUEST FOR RECONSIDERATION

Claims 11 – 16 remain active in this application.

The claimed invention is directed to an offshore pipe comprising a layer of a syntactic polyurethane comprising a polyol component which comprises a polyetherpolyol and an oil based on C₆₋₂₅ fatty acids and comprising hollow microspheres.

Offshore pipes, used to transport oil through the ocean depths, are benefited by thermal insulation properties which have heretofore been achieved by inclusion of a hollow microfillers. However, such microfillers can lead to a reduction in hydrolytic stability as well as unsatisfactory low-temperature flexibility. Accordingly, offshore pipes having good thermal insulation properties, hydrolytic stability and low temperature flexibility are sought.

The claimed invention addresses his problem by providing an offshore pipe comprising a layer of a syntactic polyurethane comprising a polyisocyanate component, a polyol component which comprises a polyetherpolyol and an oil based on C₆₋₂₅ fatty acids and hollow microspheres. Applicants have discovered that the presence of an oil based on C₆₋₂₅ fatty acids in the polyol component can improve stability to hydrolysis. Such an offshore pipe is nowhere disclose or suggested in the cited references.

The rejection of claims 11-16 under 35 U.S. C. 103(a) over Grimm et al. U.S. 6,387,447 in view of Croft U.S. 5,688,860 is respectfully traversed.

None of the cited references, alone or in combination suggest that the claimed polyol component containing 10-90 wt.% of an oil based on C₆₋₂₅ fatty acids would provide improved hydrolytic stability in an artificial seawater test.

Grimm et al. has been cited for a disclosure of a pipe comprising a syntactic polyurethane layer comprising a polyol having an OH number of 36 as well as castor oil, citing example 1. Castor oil is a component as a result of its use as a carrier for a zeolite component. There is no specific reason to incorporate castor oil into the polyurethane other

than for the introduction of the zeolite. Accordingly, as noted in the official action there is no disclosure of the claimed content of oil based on fatty acid of 10-90 wt.%.

Croft has been cited for a disclosure in which castor oil is used a polyol component in a polyurethane. However, there is no suggestion in Croft that inclusion of an oil based on a C₆₋₂₅ fatty acid would provide enhanced hydrolytic stability.

Applicants have tested the hydrolytic stability in an artificial seawater test of a syntactic polyurethane containing a polyol component containing 10-90 wt. % of an oil based on C₆₋₂₅ fatty acids as compared with a composition containing less than 10 wt. % of a C₆₋₂₅ fatty acid. The polyurethane composition were tested as cubes with a length edge of 25 mm produced by mixing components described in Table 1 as follows:

Components (parts by weight)	Example	Comparative Sample
Castor oil	58.75	2.5
Polyol 1 ¹	30	43.9
Polyol 2 ²	-	31.65
Dipropylene glycol	7.3	18
Additive	3.95	3.95
Hollow microspheres	42	42

¹Based on propyleneoxide with an OH-number of 104

²Based on propyleneoxide with an OH-number of 55

The additive contained a catalyst, defoamer and moisture scavenger added in 2.5 pbw of castor oil. The polyisocyanate component was Iso PMDI 92050, a diphenylmethanediisocyanate.

The cubes were stored in artificial seawater at a temperature of 80°C and the water uptake was measured at time intervals of 7 days, 14, days and 28 days. The data is as follows:

Water content after days (wt.%)	example	Comp example
0	0	0
7	2.0	3.6
14	2.3	3.8
28	2.0	3.7

The data demonstrates an increases uptake in water, indicative of hydrolysis of the syntactic polyurethane for the comparative sample containing only 2.5 pbw of castor oil as compared with the example containing 58.75 pbw of castor oil. Such an improvement in hydrolytic stability from the addition of a fatty acid oil to the polyol component is not suggested by the cited references.

As the cited references fail to suggest an improvement in hydrolytic stability by the addition of a fatty acid oil to the polyol component, the claimed invention is not rendered obvious by the cited references and withdrawal of the rejection under 35 U.S.C. 103(a) is respectfully requested.

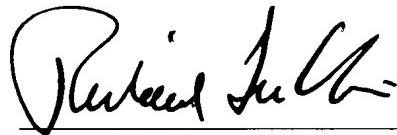
The objection claim 14 has been addressed by addition of the comma as suggested by the examiner.

Applicants note the examiner's recognition of the Scotchlight® trademark on page 2 of applicants' specification. Applicants respectfully note that the product Scotchlight® is identified as a 3M product and generically to glass bubbles, such that applicants' use of the Scotchlight® is in a manner which is most respectfully of the mark. Applicants further note that the cited reference of Croft is assigned to Minnesota Mining and Manufacturing Company (3M) of St. Paul Minn who at column 12 identify "Scotchlight™ available from Minnesota Mining and Manufacturing Company (3M)." Thus, the owner of the Scotchlight® trademark does not see fit to capitalize the term and accordingly, applicants should not be held to any different standard. No correction is necessary.

Applicants submit that this application is now in condition for allowance and early notification of such action is earnestly solicited.

Respectfully submitted,

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